

MODULAR SCALEABLE FLOATING SYSTEM

RELATED APPLICATION

This application is a continuation of International Application No. PCT/CA02/00030 filed January 11, 2002.

5 TECHNICAL FIELD

The invention provides a modular scaleable floating assembly of interconnected buoyant platform modules anchored in any selected configuration, optionally connected with articulating bridges, to simultaneously serve as: a swimming platform,
10 safety barrier; and floating dock platforms for various water based activities.

BACKGROUND OF THE ART

The shoreline areas of many beaches, resorts or parks include floating docks to access water sport activities or provide
15 entertainment platform areas adjacent the shoreline beach area. Generally, the buoyant floats are attached together and anchored in the water with leads to concrete blocks or anchored to the shoreline to provide a floating platform area.

Beach areas are often used for rental and use of watercraft
20 such as canoes, kayaks and water bicycles. The floats may be used to separate swimming areas from areas where watercrafts are permitted or to restrict the area within watercraft may be operated.

Docks for mooring watercraft may also be anchored a distance from the shoreline and are used as swimming or diving platforms as well. Floating docks are used for mounting slides, parasols, snack bars, sun-tanning lounges and other water based activities.

A disadvantage of the prior art systems is that various beach structures are individually designed and constructed with no long term plan, adequate resistance to salt water and weather conditions, and the various components are not coordinated in an esthetically pleasing harmony. Often the docks, swimming float separators, lounge platforms, etc., are individually purchased are not visually or operationally integrated with each other. The lack of integration detracts from the appearance of the recreational area with a rather disorganized collection, and does not benefit from the cost reduction in maintaining and purchasing interchangeable modular components.

As well, beach areas are often used for various races, sporting or entertainment activities. There is a desire to witness such activities from within the water. However to date no convenient means to accommodate spectators has been provided apart from conventional docks or associated walk way structures.

It is an object of the invention to provide a modular system of common components for assembly in floating modular systems, which can be integrated and reorganized at the will of a designer.

It is also an object of the invention to provide floating modular units that can securely mount slides, umbrellas, chairs, kiosks, flags, lights, sound systems, diving boards,

ladders, lifeguard stations, and serve as a reliable docking or swimming platform.

Further objects of the invention will be apparent from review of the disclosure and description of the invention below.

5 **BRIEF DESCRIPTION OF THE DRAWINGS**

In order that the invention may be readily understood, one preferred embodiment of the invention will be described by way of example, with reference to the accompanying drawings wherein:

10 Figure 1 is an elevation view of a single circular platform module with peripheral mooring handles, central socket, and edge sockets adjacent the outer periphery of the platform top surface.

15 Figure 2 is a side elevation view of a circular platform module a concrete block anchor secured with a rope to the platform underside.

Figure 3 is a side elevation view of a circular platform module with parasol mounted to a central socket in the platform top surface.

20 Figure 4 is a side elevation view of a circular platform module with water slide mounted to edge sockets in the platform top surface.

Figure 5 is a plan view of a bridge module for interconnecting circular float modules together.

Figure 6 is a side view of the bridge module of Fig. 5.

Figure 7 is a plan view of three circular float modules joined in a triangular array with three interconnecting bridge modules.

5 Figure 8 is a plan view of three circular float modules joined in a straight-line array with two bridge modules.

Figure 9 is a plan view of seven circular float modules joined in a hexagonal array.

10 Figure 10 is a plan view of six circular float modules joined in a hexagonal array with open central area to create an enclosed swimming area.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Figures 1 and 2 show details of a like hollow rotary moulded plastic platform module 1, in the embodiment illustrated having
15 the shape of a relatively flat circular disc. However, it will be apparent that moulds for various shapes of platforms can be readily produced without departing from the teaching of the present invention. The circular float shape is preferred as opposed to a square for example due to the superior buoyancy
20 and reduced tendency to overturn when swimmers climb on to the module from the water. As well, the lack of corners avoids localized wear, reduces accidental physical contact with swimmers, and circular modules can be rolled on land easily rather than being lifted. Fewer anchors are required when
25 circular floats are anchored at their centre point and they can rotate around the anchor in wind and current.

The platform module 1 may be produced in six identical circular segment components with radial joints 2 for ease of manufacture, storage, and transportation. Mooring handles 3 may be used for mooring various watercrafts (not shown) with appropriate mooring lines. The mooring handles 3 can also be used for swimming access, mounting ladders, or securing a string of buoys to delineate a swimming or water sport area.

Referring in particular to Figures 3 and 4, the platform modules 1 include a central socket 4, edge accessory mounting sockets 5 in the upper surface and can perform a variety of accessory mounting functions. Optionally, accessory mounting sockets 4 and 5 can pass straight through the module 1 and serve to drain any water that accumulates on the top surface.

However, as indicated in Figures 3 and 4, a primary function of the accessory mounting sockets is to mount various accessories such as the slide 6 and a slide ladder 7 shown in Figure 4 and a parasol 8 in Figure 3. Other accessories that are not shown in the drawings but may be readily incorporated into the water entertainment assembly are flags, snack bar kiosks, a diving board, an umbrella or parasol, a lifeguard station, a trampoline, a chair or lounge, various illumination means such as battery or solar powered lights, and sound system components such as audio speakers, microphones, etc. The platform modules 1 can be used for boat races and include lifeguard stations, announcer modules with sound systems, external lighting for nighttime use or internal illumination of translucent plastic components.

Figures 5 and 6 show views of an interlocking bridge module 9 that is shaped to join two adjacent circular modules by

insertion of pegs 10 into the edge sockets 5 of the modules 1. Various patterns of module 1 assemblies can be constructed using interlocking bridge modules 9 as shown in Figures 7, 8, 9 and 10. The pegs 10 and inherent resilience of the plastic components permits adequate flexing to result in an articulated assembly. As a result, the large assemblies of circular and bridge modules 1 and 9 can withstand the roll of wave action without coming apart or encountering damage. Drain holes 11 serve to withdraw any water that accumulates on the surface of the bridge module 9.

The modular construction of rotary moulded plastic components with hollow plastic walls are easily removed for storage in off-season, and can be rearranged in various designs to introduce variety. The modules are light and easy to store or transport unlike conventional dock and swimming barrier structures.

The modules can also be used to construct beach structures rather than floating structures for different events on land. Parasols, chairs, kiosks, slides and the like can be secured to the circular modules in a structure that resists wind damage and can be disassembled quickly for storage or redeployment. Similar assemblies can be used on ice for winter activities such as ice fishing or for safe spectator viewing platforms during snowmobile racing.

Although the above description and accompanying drawings relate to a specific preferred embodiment as presently contemplated by the inventor, it will be understood that the invention in its broad aspect includes mechanical and functional equivalents of the elements described and illustrated.